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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,963	01/20/2004	Behrokh Khoshnevis	028080-0115	1462

7590 09/26/2005

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EXAMINER	
DEL SOLE, JOSEPH S	
ART UNIT	**PAPER NUMBER**
1722	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/760,963	KHOSHNEVIS, BEHROKH	
	Examiner	Art Unit	
	Joseph S. Del Sole	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-17* is/are allowed.

6)☒ Claim(s) *1-3,5-11 and 18-23* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore, Jr (6,170,220).

Moore, Jr teaches a wall (Fig 2A, #10) having a set of spaced apart rims (Fig 2A, #20), a plurality of separate layers of a rim material, stacked on top on one another (Fig 1 shows multiple layers #20 stacked upon one another); a filler (Fig 2A, C) between the rims, the filler including a plurality of separate layers of a filler material, the filler material different from the rim material (each horizontal layer of wall would have concrete separately filled in therefore causing separate layers); the rims are made of a material different than the filler (col 3, lines 40-50); the rims are made of plastic (col 3, line 42) and the filler is made of concrete (col 3, line 9); one or more rectangular openings within the wall (Figs 1-5); one of the layers of each rim was extruded at the same time as one of the layers of the filler; and the layers of each rim that were extruded at the same time are at a level within the wall that is different than the level of the layer of the filler that was extruded at the same time.

The Examiner notes that product claims 18-23 are not further limited by limitations towards the method of which the walls are formed.

3. Claims 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Melnick et al (5,664,382).

Melnick et al teach a wall (Fig 1, #10 including concrete within) having a set of spaced apart rims (Fig 1, #12, #12' and #12"), a plurality of separate layers of a rim material, stacked on top on one another (Fig 1, #s 12, 12' and 12"); a filler (Fig 2, #25) between the rims, the filler including a plurality of separate layers of a filler material, the filler material different from the rim material (each horizontal layer of wall would have concrete separately filled in therefore causing separate layers); the rims are made of a material different than the filler (col 3, lines 50-60); the rims are made of plastic (col 4, line 33) and the filler is made of concrete (col 4, line 3); one or more rectangular openings within the wall (Figs 1 and 2); one of the layers of each rim was extruded at the same time as one of the layers of the filler; and the layers of each rim that were extruded at the same time are at a level within the wall that is different than the level of the layer of the filler that was extruded at the same time.

The Examiner notes that product claims 18-23 are not further limited by limitations towards the method of which the walls are formed.

4. Claims 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bangma (5,749,196).

Bangma teaches a wall (Fig 22, #10) having a set of spaced apart rims (Fig 2, # 1), a plurality of separate layers of a rim material, stacked on top on one another (Fig 2 shows multiple layers stacked upon one another); a filler (Fig 2, 14) between the rims, the filler including a plurality of separate layers of a filler material, the filler

material different from the rim material (col 3, lines 3-37); the rims are made of a material different than the filler (col 3, lines 3-37 and col 4, lines 44-53); the rims are made of plastic (col 4, lines 44-53) and the filler is made of concrete (col 4, line 36); one or more rectangular openings within the wall (Fig 2); one of the layers of each rim was extruded at the same time as one of the layers of the filler; and the layers of each rim that were extruded at the same time are at a level within the wall that is different than the level of the layer of the filler that was extruded at the same time.

The Examiner notes that product claims 18-23 are not further limited by limitations towards the method of which the walls are formed.

5. Claims 18-19, 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Winter, IV (4,833,855).

Winter, IV teaches a wall (Fig 3) having a set of spaced apart rims (Fig 3, #10), a plurality of separate layers of a rim material, stacked on top on one another (Fig 3); a filler (Fig 3, #12) between the rims, the filler including a plurality of separate layers of a filler material, the filler material different from the rim material (col 3, line 55 - col 4, line 15); the rims are made of a material different than the filler (col 3, line 55 - col 4, line 15) one or more rectangular openings within the wall (Fig 3); one of the layers of each rim was extruded at the same time as one of the layers of the filler; and the layers of each rim that were extruded at the same time are at a level within the wall that is different than the level of the layer of the filler that was extruded at the same time.

The Examiner notes that product claims 18-23 are not further limited by

limitations towards the method of which the walls are formed.

6. Claims 1, 3 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamane et al (5,059,266).

Yamane et al teach a multi-nozzle assembly having a first nozzle configured to extrude material a first material through a first outlet (Fig 12, #116 and #124); a second nozzle configured to extrude the first material through a second outlet (Fig 12, #118 and #122); a third nozzle (Fig 12, #117 and #122) configured to extrude a second material different from the first material through a third outlet (the structure of the apparatus does not preclude a method being followed wherein #s 122 and 124 distribute the same material to #s 116 and 118 and a # 123 distributes a different material to #117), the third outlet being between the first and second outlets; a valve controller configured to regulate the extrusion by the first, second, and third nozzles so as to allow, during a first time period, extrusion of the first material by the first and second nozzles while not allowing any extrusion of the second material by the third nozzle, then to allow, during a second time period, extrusion of the first material by the first and second nozzles as well as extrusion of the second material by the third nozzle (Fig 12, #s 111, 112, 113, 114 and 115 and col 6, line 56 - while the exact method of control may or may not be taught, such method limitations have no weight -- instead the control structure is taught that enables the device to be capable of the claimed control); a nozzle position controller configured to controllably vary the height of at least one of the outlets with respect to the height of at least one of the other outlets (Fig 12); an orientation-control mechanism configured to control the orientation

of the multi-nozzle assembly (Fig 12); the orientation-control mechanism is configured to control the orientation of the multi-nozzle assembly in three dimensions (Fig 12); a material feed system configured to feed material to each nozzle (Fig 12, #122, 123, 124); the material feed system is configured to keep the material that is fed to the first and second nozzles separate from the material that is fed to the third nozzle (Fig 12); the material feed system includes a valve system configured to selectably cut off the flow of material to each of the nozzles in a controllable manner (Fig 12); and further including a controllable gate configured to controllably block material extruded from at least one of the nozzles from flowing in one direction.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al (5,059,266).

Yamane et al teach the apparatus as discussed above.

Yamane et al fail to teach each outlet having a substantially rectangular cross-section and the width of the first and second outlet being less than the width of the third outlet.

Changing the shape of an outlet would be readily determined by routine experimentation in an effort to produce the optimum results. Therefore it is taught to use a differently shaped outlet (in this case rectangular cross-section) for the purpose of changing the shape of the product. In re Dailey et al 149 USPQ 47. Furthermore in In re Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. Therefore it is taught that changing the size of a device is obvious for the purpose of changing the size of a product produced.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Yamane et al with a rectangular cross-section and differing outlet widths because such changes change dimensions of the final product produced.

Allowable Subject Matter

10. Claims 12-17 are allowed.

11. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed 3/25/05 have been fully considered but they are not persuasive.

The Applicant argues that the Moore document does not teach or suggest spaced apart rims having separate layers of a rim material stacked on top of one another and separate layers of a filler material.

The Examiner disagrees. Along with the comments set forth above, Fig 1 clearly shows layers stacked one upon another (the corner segment shows a double stacking and the ends show a single stacking). Each side panel is a separate layer. The method by which the product is produced has no weight, and only limitations pertaining to the final product limit the claim. As stated above, "product claims 18-23 are not further limited by limitations towards the method of which the walls are formed."

The Applicant argues that Yamane teaches ink jet heads and not a multi-nozzle assembly.

The Examiner disagrees. Yamane teaches the use of nozzles to extrude material and form three dimensional products a layer at a time. The claimed limitations are clearly discussed above in relation to the Yamane reference.

The Applicant argues that Yamane does not teach or suggest a multi-nozzle assembly that includes first, second and third nozzles configured to extrude material

through respective first, second and third outlets, but rather illustrates different ink jet heads which simply spray material in form of a droplet and do not extrude any material.

The Examiner disagrees. Despite the nozzles being used to deposit material, they are extruders as claimed. The differences discussed by the Applicant regarding the spraying of material, the Examiner notes that such shaping would occur by the nozzles of Yamane depending on the material used.

The Applicant argues that King lacks a multi-nozzle assembly.

The Examiner disagrees. The shaping of the material through the three openings sets forth the three openings as nozzles as claimed. The nozzles are configured to extrude different or the same materials because they are fed from different sources. The valve controller as claimed is only positively structurally recited to the extend that the controllers of Yamane are capable of the methods recited.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the Examiner by telephone are unsuccessful, Mr. Duane Smith can be reached at (571) 272-1166. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph S. Del Sole
September 21, 2005